We Claim:

1. A method of using ultrasound to analyze a media of interest, comprising the steps of:

transmitting an ultrasound pulse into the media of interest, the ultrasound pulse being modified by the media of interest;

receiving at a transducer the modified ultrasound pulse;

generating signals in response to the received modified ultrasound pulse;

parallel processing the signals using a plurality of imaging modes; and

generating positional data responsive to the parallel processed signals.

2. The method of claim 1, wherein the step of generating positional data includes area-forming.

3. A method of using ultrasound to analyze a media of interest, comprising the steps of:

transmitting a plurality of ultrasound pulse into the media of interest, the ultrasound pulses being modified by the media of interest;

receiving at one or more transducers the modified ultrasound pulses;

generating analog signals in response to the received modified ultrasound pulses;

converting the analog signals to digital data using an A/D converter;

preprocessing the digital data using a plurality of frequency band preprocessors; and

generating positional data responsive to the preprocessed digital data.

4. The method of claim 3, wherein digital data resulting from an individual member of the plurality of ultrasound pulses is processed using a plurality of imaging modes.

5. The method of claim 3, further including the step of displaying an image visibly temporally synchronized using the generated positional data.

6. The method of claim 3, wherein the step of preprocessing the digital data is preprocessed in parallel.

7. The method of claim 3, wherein the positional data is generated using echo-forming.

8. The method of claim 3, wherein the positional data is generated using echo-forming and the echo-forming uses an area-forming module that includes a plurality of area-formers.

9. The method of claim 3, further including the step of providing preprocessed digital data to one or more members of a plurality of area-formers from one or more members of the plurality of frequency band preprocessors.

10. The method of claim 6, further including the step of providing the positional data to an image scan converter, wherein the positional data is generated using a plurality of imaging modes.

11. The method of claim 10, further including the step of generating image data using the image scan converter and the positional data.

12. The method of claim 10, further including the step of generating image data using the image scan converter and the positional data, wherein the image data is visibly temporally synchronized.

13. The method of claim 6, wherein the step of preprocessing the digital data is performed using a plurality of imaging modes.

14. The method of claim 13, wherein the plurality of imaging modes includes Doppler imaging.

15. The method of claim 13, wherein the plurality of imaging modes includes imaging using harmonic frequencies.

16. The method of claim 3, wherein the step of preprocessing the digital data is done in parallel, and
the plurality of frequency band preprocessors are responsive to encoding within the digital data.

17. The method of claim 3, further including the step of post-processing the positional data in parallel using a plurality of post-processors.

18. An ultrasonic analysis system comprising:
an ultrasound transducer for transmitting ultrasound pulses into a media of interest such that the media of interest modifies the ultrasound pulses;
a transducer for receiving the modified ultrasound pulses and generating signals responsive to the modified ultrasound pulses;
a plurality of frequency band preprocessors for preprocessing the signals in parallel; and
an echo-forming system for generating positional data responsive to the preprocessed signals.

19. The system of claim 18, wherein the echo-forming system includes a plurality of beamformers configured to receive signals preprocessed using a plurality of imaging modes.

20. The system of claim 18, wherein the echo-forming system includes an area-forming module.